410 Rec'd PCT/PTO 07 SEP 2001

FORM PTO-1390 (REV 11-98) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		CBDL:0007/YOD
		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 09/936182
INTERNATIONAL APPLICATION NO. PCT/FR00/00576	INTERNATIONAL FILING DATE 9 March 1999	PRIORITY DATE CLAIMED 12 March 1999

TITLE OF INVENTION

DEVICE FOR THE QUICK CLOSING AND OPENING OF SMALL LIQUID CONTAINERS

APPLICANT(S) FOR DO/EO/US

Bruno Teppe

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This express request to begin national examination procedures (35 U.S.C. 371(f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. To 16. Below concern document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A FIRST preliminary amendment. ☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☐ Other items or information.

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO	ATTORNEY'S DOCKET NUMBER
09/936182	PCT/FR00/00576	CBDL:0007/YOD

17. ☒ The following fees are submitted:

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):

Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO.....**$1000.00**

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO.....**$860.00**

International Preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO.....**$710.00**

International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33 (1)-(4).....**$690.00**

International Preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4).....**$ 100.00**

CALCULATIONS PTO USE ONLY	
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 860.00
Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	4 - 20 =		x $18.00	$
Independent claims	1 - 3 =		x $80.00	$
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ $260.00	$
TOTAL OF ABOVE CALCULATIONS =				$ 860.00
Reduction of ½ for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).				$
SUBTOTAL =				$ 860.00
Processing fee of $130.00 for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				$
TOTAL NATIONAL FEE =				$ 860.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property +				$
TOTAL FEES ENCLOSED =				**$860.00**
			Amount to be: Refunded	$
			Charged	$

a. ☐ a check in the amount of $_____ to cover the above fees is enclosed.

b. ☐ please charge my Deposit Account No. _____ in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. **06-1315**; Order No.: **CBDL:0007/YOD**. A duplicate copy of this sheet is enclosed.

d. ☒ Fees are to be charged to a credit card. **WARNING:** Information on this form may be public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Patrick S. Yoder
Fletcher, Yoder & Van Someren
P.O. Box 692289
Houston, Texas 770269-2289

SIGNATURE

Patrick S. Yoder
NAME

37,479
REGISTRATION NUMBER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Bruno Teppe	§	Group Art Unit: Unassigned
International Application No.: PCT/FR00/00576 International Filing Date: March 9, 2000	§	Examiner: Unassigned
Serial No.: Unassigned	§	
Filed: Herewith	§	
For: DEVICE FOR THE QUICK CLOSING AND OPENING OF SMALL LIQUID CONTAINERS	§	Atty. Docket: CBDL:0007/YOD

"EXPRESS MAIL" MAILING LABEL	
NUMBER:	EL 652 336 355 US
DATE OF DEPOSIT:	September 7, 2001

Pursuant to 37 C.F.R. § 1.10, I hereby certify that I am personally depositing this paper or fee with the U.S. Postal Service, "Express Mail Post Office to Addressee" service on the date indicated above in a sealed envelope (a) having the above-numbered Express Mail label and sufficient postage affixed, and (b) addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

9/7/01 — Date

Lynda Howell — Lynda Howell

Assistant Commissioner
For Patents
Washington, D.C. 20231

Dear Sir:

PRELIMINARY AMENDMENT

Prior to calculation of the fees for the above-referenced National Phase filing, please amend the subject application as follows:

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) A closing device adaptable to a glass or thermoplastic container comprising a neck closable by a stopper forced into the neck or screwed or clipped or crimped to the side wall of the neck while compressing a seal onto the upper end of the neck, the device consisting of a sleeve comprising an internal channel having an axis of symmetry that opens at one end on a leaktight connection of the closing device to the neck of a container and at the other end in a sliding-contact surface which is a sector of a cylinder or a portion of a sphere, having an

axis of symmetry of revolution that intersects the axis of symmetry of the internal channel of the sleeve at right angles, providing the bottle with a new orifice that can be closed by a shut-off plate connected to a caliper which pivots, via the ends of its two parallel arms, about two journals integral with the sleeve, on which the arms pivot by means of a bore, the device being characterized in that the journals and the bores form cams that enable the pressure of the shut-off plate on the sliding-contact surface to be varied and in particular the pressure of the sealing means to be varied when the new orifice is closed using control means.

2. (Amended) The closing device as claimed in claim 1, characterized in that a sealing means consists of a seal with a flexible lip integral with the new orifice, shaped essentially as a frustum of a cone of revolution, while the shut-off plate comprises, in the area that covers the new orifice, a small spherical cap with a diameter roughly the same as that of said orifice and with a radius of curvature of the spherical cap that is much greater.

3. (Amended) The closing device as claimed in claim 1, characterized in that a control means is a lever integral with the parallel arms of the caliper.

4. (Amended) The closing device as claimed in claim 1, characterized in that the closing device is produced from thermoplastic injection-molded parts clipped or welded together.

IN THE ABSTRACT

Please amend the abstract as follows:

The closing device consisting of a sleeve that seals onto the neck of a bottle and that comprises an internal channel which opens, via a new orifice in a sliding-contact surface with associated slopes and slideways acting as guide means to a shut-off plate for closing the new orifice which is moved translationally by a knob, which sliding-contact surface may be planar or in the form of a sector of a cylinder of revolution or in the form of a portion of a sphere.

REMARKS

If the Examiner believes that a telephonic interview will help speed this application toward issuance, Applicant invites the Examiner to contact the undersigned at (281) 970-4545.

Attached hereto is a marked-up version of the changes made to the drawings and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

Respectfully submitted,

Date: 9/7/2001

PQ

Patrick S. Yoder
Reg. No. 37,479
FLETCHER, YODER & VAN SOMEREN
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

The claims have been amended as follows:

1. (Amended) A closing device adaptable to a glass or thermoplastic container comprising a neck closable by a stopper forced into the neck or screwed or clipped or crimped to the side wall of the neck while compressing a seal onto the upper end of the neck, the device consisting of a sleeve ~~(20)~~ comprising an internal channel ~~(33)~~ having an axis of symmetry ~~(18)~~ that opens at one end on a leaktight connection of the closing device to the neck ~~(4)~~ of a container and at the other end in a sliding-contact surface ~~(19)~~ which is a sector of a cylinder or a portion of a sphere, having an axis of symmetry of revolution ~~(17)~~ that intersects the axis of symmetry ~~(18)~~ of the internal channel of the sleeve ~~(20)~~ at right angles, providing the bottle with a new orifice ~~(26)~~ that can be closed by a shut-off plate ~~(21)~~ connected to a caliper ~~(22)~~ which pivots, via the ends of its two parallel arms ~~(23)~~, about two journals ~~(24)~~ integral with the sleeve ~~(20)~~, on which the arms pivot by means of a bore ~~(25)~~, the device being characterized in that the journals ~~(24)~~ and the bores ~~(25)~~ form cams that enable the pressure of the shut-off plate ~~(21)~~ on the sliding-contact surface ~~(19)~~ to be varied and in particular the pressure of the sealing means ~~(27)~~ to be varied when the new orifice ~~(26)~~ is closed using control means ~~(31)~~.

2. (Amended) The closing device as claimed in claim 1, characterized in that a sealing means consists of a seal ~~(27)~~ with a flexible lip integral with the new orifice ~~(26)~~, shaped essentially as a frustum of a cone of revolution, while the shut-off plate ~~(21)~~ comprises, in the area that covers the new orifice ~~(26)~~, a small spherical cap with a diameter ~~(28)~~ roughly the same as that of said orifice ~~(26)~~ and with a radius of curvature of the spherical cap that is much greater.

3. (Amended) The closing device as claimed in claim 1, characterized in that a control means is a lever ~~(31)~~ integral with the parallel arms ~~(23)~~ of the caliper ~~(22)~~.

4. (Amended) The closing device as claimed in claim 1 ~~any one or more of the preceding claims~~, characterized in that the closing device is produced from thermoplastic injection-molded parts clipped or welded together.

IN THE ABSTRACT

The abstract has been amended as follows:

The closing device ~~(1)~~ consisting of a sleeve ~~(2)~~ that seals onto the neck ~~(4)~~ of a bottle and that comprises an internal channel ~~(3)~~ which opens, via a new orifice ~~(5)~~ in a sliding-contact surface ~~(7)~~ with associated slopes ~~(10)~~ and slideways ~~(14)~~ acting as guide means to a shut-off plate ~~(9)~~ for closing the new orifice ~~(5)~~ which is moved translationally by a knob ~~(12)~~, which sliding-contact surface ~~(7)~~ may be planar or in the form of a sector of a cylinder of revolution or in the form of a portion of a sphere.

Device for the quick closing and opening of small liquid containers

The present invention relates to a quick closing and opening device designed to be fitted to small liquid containers such as glass or thermoplastic bottles.

There is wide use of glass or thermoplastic bottles comprising a neck closed by a cork stopper forced into the neck or a cap screwed or clipped or crimped onto the outer side wall of the neck in order to compress a seal against the top of the neck: to remove these stoppers or caps, the bottle must be held in one hand and the cork or cap removed with the other. This occupies both hands and means that the cork must be put down if one hand is to be freed to hold a glass: the movement of extracting the cork is a movement of rotation and traction followed possibly by a movement of laying it down, which takes time and which requires at least as much time for the reverse operation. In the case of beer and lemonade there exists a reusable system of closing glass bottles comprising a plug fitting into the neck. This is generally made of porcelain with a thick rubber annular seal combined with a clamping device which clamps the plug by using the elastic compressibility of the seal: as non-returnable bottles are used more and more, this closing device is tending to disappear; this closing system is easy to open and the plug stays attached to the neck, but on the other hand it is slightly more difficult to reclose.

In bars there are bottles in which the neck is equipped with a small-diameter spout, comprising an air inlet device, but these are not airtight; there are also measuring stoppers attached to bottles of apéritifs which are placed upside down on holders: these devices only deliver small amounts of liquid when the edge of

the glass is pressed firmly against guards which move and raise a valve, so that the liquid is released.

Some faucets connected to a supply of fluid under pressure or to a large container have quick-closing devices using two spherical or cylindrical surfaces of the same curvature, one sliding inside the other in order to position two openings in alignment or out of alignment to allow a fluid to pass through: examples are faucets with a spherical or cylindrical plug that is opened or closed by a quarter-revolution of a control lever, such as faucets for wooden barrels, certain "ball-type" sink faucets, and the valves situated at the ends of fire nozzles; all these devices can be used with only one hand and allow rapid opening and closing. These faucets are generally made of metal and use precision components which are expensive.

The object of the invention is to propose a closing device that can be operated by a single simple movement to both close and open it, of the type defined in the preamble of claim 1 and known from the combination of patents CH-A-249764, DE-A-2409760 and US-A-2141572, but that is leaktight and not very expensive so that it can be used on small containers of liquids, even if aerated, and in particular on bottles that have a neck.

Described below is a device fitted to a bottle that has a screwthreaded neck, but it should be understood that the device can be transposed to other types of necks and containers.

In the appended drawings:

Figure 1 is an exploded perspective view of a closing device according to the invention using a sliding-contact surface employing planar translation guided by slopes.

Figure 2 is a section taken on a plane of symmetry of the closing device seen in figure 1.

Figure 3 is a section taken on a plane of symmetry of a variant of the closing device seen in figure 1 using a sliding-contact surface employing rotation of a cylinder of revolution or spherical rotation guided by slopes instead of a plane surface.

Figure 4 is a section through a closing device using a sliding-contact surface employing cylindrical or spherical sliding guided in rotation by a caliper pivoting about an axis.

Figure 5 is a side view of the closing device seen in figure 4 with the new orifice closed by the shut-off plate.

Figure 6 is a side view of the closing device seen in figure 4 with the shut-off plate in the open position.

A closing device 1 (figures 1 and 2) according to the invention consists of a sleeve 2 comprising an internal channel 3 which opens at one end on a means of leaktight connection between the closing device and the neck 4 of a bottle and at the other end in a plane or convex curved sliding-contact surface forming the new orifice 5 of the bottle, to which sealing means are connected: the plane or convex curved sliding-contact surface acts as a bearing surface for means of shutting off the new orifice 5 and also comprises guide means and means for shutting off said orifice. These means of shutting off the new orifice are displaced by translation or rotation by a simple manual action on a control means in order to close or open the new orifice 5.

It will now be assumed that the bottle has an essentially cylindrical neck 4 (figures 1 and 2) with a

main axis of symmetry of revolution. The means of leaktight connection of the sleeve to the neck 4 of the bottle generally uses the same means of attaching the stopper or cap which may be an external thread or a snap-on bead or a cylindrical surface inside the neck for a stopper: leaktightness is provided by known means such as a flexible seal compressed between the sleeve 1 and the upper edge of the neck 4 or a skirt resting on the inner cylindrical edge of the neck.

The sleeve 2 comprises an internal channel in the form of a cylinder of revolution 3 whose axis of symmetry 6 coincides with the main axis of symmetry of revolution of the open neck 4, thus providing a new orifice 5, in a planar sliding-contact surface 7 integral with the sleeve 2, forming an angle 8 of about forty-five degrees with the axis of symmetry 6 of the sleeve 2; this sliding-contact surface 7, which has associated guide means, acts as a bearing surface to a rigid planar shut-off plate 9 with sufficient surface area to close off the whole or part of the new orifice 5 when displaced by sliding it over the sliding-contact surface 7. The shut-off plate 9 is kept pressed against the sliding-contact surface 7 by at least one slope 10 which presses the shut-off plate 9 against the sliding-contact surface 7 by pressing on the opposite face to the bearing face of the shut-off plate 9, with a force of application varying as a function of their relative positions. The slopes 10 stop at the new orifice 5 and are fixed relative to the sliding-contact surface 7, creating a second orifice 32 that may be used to support a spout (not shown in the drawings). When the shut-off plate 9 closes the new orifice 5, the slopes 10 press the shut-off plate 9 with force all the way around the perimeter 11 of said orifice 5 to ensure the best seal possible, whereas elsewhere the movement can be free. The shut-off plate 9 is displaced by translation, rotation or a combination of these two movements by control and guide means. A control means

may be a knob 12 integral with the shut-off plate 9 and passing through a slot 13 formed either in the sliding-contact surface or in the slopes 10. A means of guiding the plate 9 in translation consists of two lateral slideways 14 situated in the planes parallel to each other and to the axis of symmetry 6, passing on either side of the new orifice 5 and on which two parallel edges 15 of the shut-off plate 9 press simultaneously.

A means of rotational guidance consists in pivoting a shut-off plate about an axis perpendicular to the planar sliding-contact surface with which it is integral; the movements of the shut-off plate are limited by end stops in the position of closure of the new orifice, as also in the open position.

The above description of a shut-off plate having translational movement over a planar sliding-contact surface can be transposed to the case of a device (figure 3) whose sliding-contact surface is a sector of a cylinder of revolution, or a portion of a sphere. In the case of rotational sliding, it can only be transposed if the sliding-contact surface is a portion of a sphere.

In another version of the invention, where the sliding-contact surface 19 is a sector of a cylinder or a portion of a sphere with an axis of symmetry of revolution 17 that essentially intersects the axis of symmetry 18 of the internal channel 33 of the sleeve 20 at right angles, the shut-off plate 21 can be provided with a caliper 22 pivoting about the axis of symmetry of revolution 17 via the ends of its two parallel arms 23. The sleeve may have two journals 24 at right angles to the side wall of the sleeve 20, on which the ends of the parallel arms 23 of the caliper 22 pivot, by means of a bore 25. The shapes of the journals 24 (figures 5 and 6) and of the bores 25 are cams to make it possible to vary the pressure of the shut-off plate 21 on the

sliding-contact surface 19 and in particular to increase the pressure when the new orifice 26 is closed. In an improvement of this version of the invention, particularly when a good gas seal is required, the new orifice 26 can be given a seal 27 with a flexible lip shaped essentially as a frustum of a cone of revolution whose large base 29 is integral with the edge of the new orifice 26 and whose small base 30 is slightly above the new orifice 26 when the orifice is open. The shut-off plate 21 comprises, in the area that covers the new orifice 26, a small spherical cap with a diameter 28 roughly the same as that of the new orifice 26 and with a radius of curvature of the spherical cap that is much greater. The bore 25 of the caliper 22 fitted to the journal 24 are shaped in such a way that, when closed, the spherical cap of the shut-off plate 21 is firmly pressed against the small base 30 of the lip seal 27, creating a sufficiently gastight seal, so that when the pressure of gas rises inside the bottle, and it is that pressure which, by deforming the lip seal 27, presses it more and more firmly against the spherical cap of the shut-off plate 21. A control lever 31 integral with the parallel arms 23 of the caliper 22 is used to place or remove the shut-off plate 21 by sliding it across the sliding-contact surface 19.

The closing device can be made for example from thermoplastic injection-molded parts cleaved or welded together.

Claims

1. A closing device adaptable to a glass or thermoplastic container comprising a neck closable by a stopper forced into the neck or screwed or clipped or crimped to the side wall of the neck while compressing a seal onto the upper end of the neck, the device consisting of a sleeve (20) comprising an internal channel (33) having an axis of symmetry (18) that opens at one end on a leaktight connection of the closing device to the neck (4) of a container and at the other end in a sliding-contact surface (19) which is a sector of a cylinder or a portion of a sphere, having an axis of symmetry of revolution (17) that intersects the axis of symmetry (18) of the internal channel of the sleeve (20) at right angles, providing the bottle with a new orifice (26) that can be closed by a shut-off plate (21) connected to a caliper (22) which pivots, via the ends of its two parallel arms (23), about two journals (24) integral with the sleeve (20), on which the arms pivot by means of a bore (25), the device being characterized in that the journals (24) and the bores (25) form cams that enable the pressure of the shut-off plate (21) on the sliding-contact surface (19) to be varied and in particular the pressure of the sealing means (27) to be varied when the new orifice (26) is closed using control means (31).

2. The closing device as claimed in claim 1, characterized in that a sealing means consists of a seal (27) with a flexible lip integral with the new orifice (26), shaped essentially as a frustum of a cone of revolution, while the shut-off plate (21) comprises, in the area that covers the new orifice (26), a small spherical cap with a diameter (28) roughly the same as that of said

orifice (26) and with a radius of curvature of the spherical cap that is much greater.

3. The closing device as claimed in claim 1, characterized in that a control means is a lever (31) integral with the parallel arms (23) of the caliper (22).

4. The closing device as claimed in any one or more of the preceding claims, characterized in that the closing device is produced from thermoplastic injection-molded parts clipped or welded together.

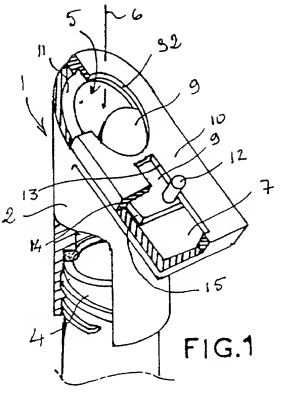

FIG.1

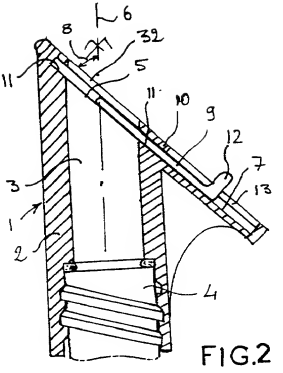

FIG.2

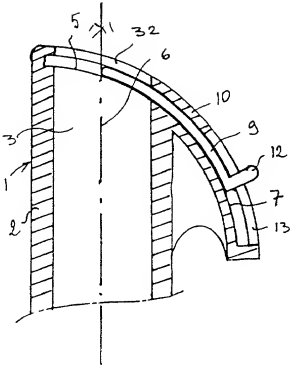

FIG.3

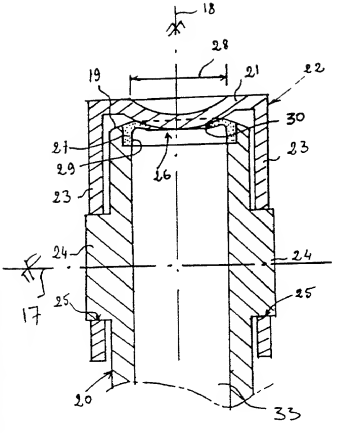

FIG.4

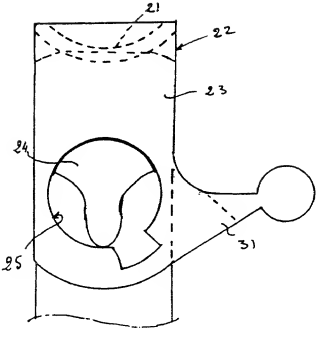

FIG.5

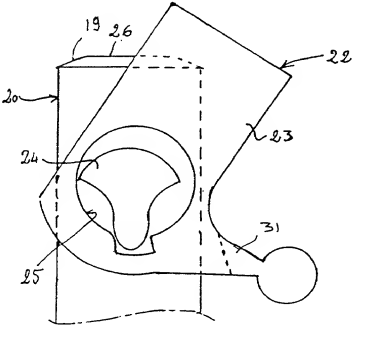

FIG.6

PATENT

COMBINED DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, **sole** inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: Device for the quick closing and opening of small liquid containers, the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, U.S.C. §119 of any foreign application for patent or inventor's certificate listed below, and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 37 U.S.C. 119
France	PCT/FR00/00576	09/03/2000	YES
France	FR99/03262	12/03/1999	YES

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SER. NO.	APPLICATION SER. NO.	FILING DATE	STATUS (patented, pending, abandoned)

(5) I hereby appoint Patrick S. Yoder (Reg. No. 37,479), Michael G. Fletcher (Reg. No. 32,777), Robert A. Van Someren, (Reg. No. 36,038), Diana M. Sangalli (Reg. No. 40,798), and Ralph A. Graham (Reg. No. 47,607) of Fletcher, Yoder & Van Someren, 7915 FM 1960 West, Suite 330, Houston, Texas 77070, jointly, and each of them severally, my attorneys, with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent and to transact all business in the Patent and Trademark Office connected therewith.

I hereby direct that all correspondence and telephone calls in connection with this application be addressed to Patrick S. Yoder, 7915 FM 1960 West, Suite 330, Houston, Texas 77070, (281) 970-4545.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that all such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole inventor: **Bruno TEPPE**

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